



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,033	07/21/2003	James R. Richter	09793953-0039	5119

26263 7590 06/14/2006

SONNENSCHN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER

PRICE, CRAIG JAMES

ART UNIT	PAPER NUMBER
----------	--------------

3753

DATE MAILED: 06/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,033	RICHTER, JAMES R.	
	Examiner	Art Unit	
	Craig Price	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 24 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 23, 25, 26, 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 24 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 May 2006 has been entered.

Election/Restrictions

2. Applicant's election with traverse of species A (Figures 1-4) in the reply filed on 12 December 2005 is acknowledged. The traversal on the reply dated 18 May 2006 is on the ground(s) that the drawings have been changed to add the use of an elbow, and that the previously withdrawn claims 24-26 be reinstated. This argument is persuasive for claim 24 which will be reinstated. This is not found persuasive for claims 25 and 26 and newly added claims 28 and 29, because the addition of the elbow to the drawings is considered as new matter, wherein the specification does not indicate the exact shape, proportions and configuration of the elbow, the claims 25,26,28 and 29 clearly recite an elbow which was a nonelected invention set forth in the initial election of species.

The requirement is still deemed proper and is therefore made FINAL.

Claims 25,26, 28 and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12 December 2005.

Drawings

3. The drawings were received on 18 May 2006. These proposed drawings are not approved because of new matter, which is not disclosed within the specification. The specification does not disclose the exact proportions or shape of the elbow.

Specification

4. The specification is ^{objected to} based on an elbow not appearing in Figure 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,5,6,12,14,15,20,22,24 and 27 rejected under 35 U.S.C. 102(b) as being anticipated by McCall (5,363,699).

Regarding claim 1,6,15,16and 27, McCall discloses a fluid flow stabilizer (10) for use in a flow of fluid in a conduit with a turbulence creating device (col. 4, ll. 42-57), comprising of a fluid conduit section (12) having a first end (20) for mounting the first end to the fluid conduit and a second end (end of flange 16) for mounting the second end to the fluid conduit, the fluid conduit section having a fluid passage therethrough to allow the fluid to flow from the first end to the second end as seen in Figure 2, a flow straightening device (36,38) positioned in the fluid conduit section, the flow straightening device (36,38) comprises one or more longitudinally extending vanes as shown in Figure 2, the fluid conduit section has a length (from 20 to the end of flange 16) and an internal diameter, with the length being less than five times the diameter, as shown in Figure 2, the second mounting arrangement comprises a flange with a series of spaced bolt holes extending therethrough (col.4, ll. 41-48). McCall also discloses that the fluid conduit section being constructed of a flexible material which is configured to absorb alignment in that all materials have some type of ability to resist torsional and bending stresses. McCall also discloses in figure 2, that the pump connector has a linear conduit section with a length and an internal diameter, the length being less than five times the diameter. The considered section from reference number 20 to flange 16 has a length equal to about 2.5 times the diameter.

Regarding claims 2 and 20, McCall discloses that the flow straightening device comprises one or more longitudinally extending vanes (36,38) as shown in figure 2.

Regarding claim 12 and 22, McCall discloses the vanes are contained entirely within the length of the fluid conduit as shown in figure 2.

Regarding claim 14, McCall discloses a mounting arrangement (16) which comprises a flange with a series of bolt holes extending therethrough as shown in figure 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1,2,4-8,10-12,14,15,24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492).

Regarding Claim 1, McCall discloses a fluid flow stabilizer (10) for use in a flow of fluid in a conduit with a turbulence creating device (col. 4, ll. 42-57), comprising of a fluid conduit section (12) having a first end (20) for mounting the first end to the fluid conduit and a second end (end of flange 16) for mounting the second end to the fluid conduit, the fluid conduit section having a fluid passage therethrough to allow the fluid to flow from the first end to the second end as seen in Figure 2, a flow straightening device (36,38) positioned in the fluid conduit section, the flow straightening device (36,38) comprises one or more longitudinally extending vanes as shown in Figure 2, the fluid conduit section has a length (from 20 to the end of flange 16) and an internal diameter, with the length being less than five times the diameter, as shown in Figure 2, the second mounting arrangement comprises a flange with a series of spaced bolt holes extending therethrough (col.4, ll. 41-48).

McCall lacks, that the fluid conduit section being constructed of a flexible material to absorb at least one of shock, vibration and alignment, and, a fluid control device.

Richter teaches the use of a fluid conduit section (11), where the fluid conduit section (11) is constructed of a flexible material (col.2, ll. 16-25) to absorb at least one of shock, vibration and alignment (col.1, ll. 5-52, and in col. 4, ll. 3-17). Kozyuk teaches the use of a valve (150) used in a fluid conduit (116) as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Richter's teaching onto McCall's fluid conduit section by having the fluid conduit section made of flexible member as taught by Richter in order to

Art Unit: 3753

provide a flexible conduit section which provides a greater acoustical impedance (col. 1, ll. 49-52).

Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fluid conduit section of McCall and Richter to have the fluid control device as taught by Kozyuk in Figure 2, in order to provide a means of controlling the fluid.

With respect to claim 11, the claimed subject matter, "each vane arranged perpendicular to adjacent vanes".

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have each vane arranged perpendicular to adjacent vanes, because applicant has not disclosed that arranging each vane perpendicular to adjacent vanes provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with McCall's vanes (36,38), because McCall's vanes are being used to stabilize the flow (col. 6, ll. 37-51).

Therefore, it would have been an obvious matter of design choice to modify the vanes of McCall, Richter and Kozyuk to obtain the invention specified in claim 11.

8. Claims 3,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492) as applied to claims 1 and 6, and further in view of Rosecrans (4,366,746).

McCall-Richter-Kozyuk in combination have taught all of the features of the claimed invention except that, the fluid conduit section comprises of a flexible metal hose. Rosecrans teaches a flexible metal hose (50), as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the conduit section of McCall, Richter and Kozyuk to have the fluid conduit section made of a flexible metal hose as taught by Rosecrans, in order to improve the number of pressure impulse cycles without failure, as shown in Figure 3 and (col. 6, ll. 55-68).

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Richter (5,273,321) and Kozyuk (6,012,492), as applied to claim 11, and further in view of Arnaudeau (4,365,932).

McCall-Richter-Kozyuk in combination have taught all of the claimed features except that, the vanes have a hydrodynamic shape. Arnaudeau teaches a flow straightener having thick fins in the hydrodynamic sense (col.6, ll. 44,45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the vanes of McCall, Richter and Kozyuk to have a hydrodynamic shape as taught by Arnaudeau, in order to define the flow of liquid and maximize uniform flow through the channel.

10. Claims 16,20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Kozyuk (6,012,492).

McCall discloses a pipe flow stabilizer for use in a pipeline between a pump (Col. 4, Lns.52-55) comprising of a pump connector having a first end (20) with a first

Art Unit: 3753

mounting arrangement for mounting the first end to the pump, the pump connector having a fluid passage therethrough to allow fluid to flow from the first end (20) to the second end (end of flange 16), and a flow straightening device (36,38) in the pump connector (12) as shown in Figure 2, and a pump connector having an internal diameter of 4 inches (Col. 4, Lns. 58-66). McCall further discloses a pump connector having a linear fluid conduit section with a length being less than five times the diameter (Col. 6, Lns. 42-44), where by this description the conduit section would have an approximate length of 2.5 times the diameter. However even if the drawings do not disclose the limitation, one of ordinary skill in the art at the time of invention would have selected a pipe length within this range due to the fact that for the portion of the pipe (12) being used in the rejection, McCall explicitly discloses two vane sets having a length of $\frac{1}{2}$ the diameter of the conduit, where one of ordinary skill in the art at the time of invention would have optimized the length to be less than 5 times the diameter, in order to make the system lighter and for space constraints.

McCall lacks a valve in a pipeline. Kozyuk teaches the use of a valve (150) used in a fluid conduit (116) as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fluid conduit section of McCall to have the fluid control device as taught by Kozyuk in Figure 2, in order to provide a means of controlling the fluid.

With respect to claim 21, the claimed subject matter, "each vane arranged perpendicular to adjacent vanes".

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have each vane arranged perpendicular to adjacent vanes, because applicant has not disclosed that arranging each vane perpendicular to adjacent vanes provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with McCall's vanes (36,38), because McCall's vanes are being used to stabilize the flow (col. 6, ll. 37-51).

Therefore, it would have been an obvious matter of design choice to modify the vanes of McCall, Richter and Kozyuk to obtain the invention specified in claim 21.

11. Claims 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Kozyuk (6,012,492), as applied to claim 16, and further in view of Richter (5,273,321).

McCall-Kozyuk in combination have taught all features of the claimed invention except that, the pump connector is constructed of a flexible material to absorb at least one of shock, vibration and alignment in the pipeline, and comprises an elastomeric material.

Richter teaches the use of a fluid conduit section (11), where the fluid conduit section (11) is constructed of a flexible material (col.2, ll. 16-25) to absorb at least one of shock, vibration and alignment (col.1, ll. 5-52 and in col. 4, ll. 3-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Richter's teaching onto McCall-Kozyuk's pump connector by having the pump connector constructed of a flexible material to absorb at least one of shock, vibration and alignment as taught by Richter in order to provide a pump connector that provides a greater acoustical impedance (col. 1, ll. 49-52).

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCall (5,363,699) in view of Kozyuk (6,012,492), as applied to claim 16, and further in view of Rosecrans (4,366,746).

McCall and Kozyuk have taught all of the claimed features except that, the pump connector comprises a flexible metal hose. Rosecrans teaches a flexible metal hose (50), as shown in Figure 2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the pump connector of McCall and Kozyuk to have the pump connector made of a flexible metal hose as taught by Rosecrans, in order to improve the number of pressure impulse cycles without failure, as shown in Figure 3 and (col. 6, ll. 55-68).

Response to Arguments

13. Applicant's arguments filed 18 May 2006 have been fully considered but they are not persuasive.

In regards to your first argument,

Where "McCall does not mention a downstream fluid or control device", McCall discloses that the conduit is provided at the outlet with a male fitting for attachment thereto of a fire hose (Col. 4, Lns. 55-57), the fire hose itself is a fluid control device in that the inside diameter of the hose restricts or controls the water to that inner diameter as the water travels within the hose itself.

In regards to your next argument concerning the use of Richter not having flow straightening or conditioning features, Richter was being used for the flexible requirement of the apparatus, although the inner diameter of Richter's conduit would condition the flow in some manner. Similarly towards your next argument, Kozyuk conditions the flow in to form of cavitation (Col. 7, Lns.1-7).

In regards to your argument concerning the use of Rosecrans, the hose has a certain length which will condition the internal flow to some extent.

In regards to your argument concerning the use of Arnaudeau, the fins are described as being thick in the hydrodynamic sense, the claimed subject matter only requires that the vanes have a hydrodynamic shape, which is clearly stated in column 6, lines 44-45.

In regards to your argument where Examiner asserts that McCall inherently absorbs shock, Examiner is not sure where in the action this was discussed,

Art Unit: 3753

although rigid pipe structures are capable of accepting torsional and bending stresses thereby absorbing alignment issues. Furthermore applicant's argument suggest that rigid structures are incapable of absorbing at least one of shock, vibration and alignment in the conduit, the structure of McCall is used in flow measurement for fire hydrants, which would receive shock as the flow is initially turned on, otherwise if the unit could not receive such limitations as shock and vibration, the device would not be operable. Therefore the device of McCall inherently meets this limitation.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The reference for the "greater acoustical impedance" comes from Column 1, lines 49-52. Furthermore, it is obvious to combine the references because they are both connectors used in fluid systems, and the desirability for this is to reduce sound being transmitted through the fluid system.

In your regards to your next argument concerning the combination destroys the highly reliable measurements, examiner does not know how this combination would effect the significance of the reliability of the measurements, where if the measurements

were used in comparison from one system to the next after the combination was performed then the change in reliability may not be significant.

Applicant argues the use of Kozyuk as not being concerned with flow condition or being able to absorb shock, etc., when the examiner is using the teaching of the reference to provide a fluid controlling device such as the teaching of a valve which clearly provides a means of controlling the fluid. Furthermore, in regards to the use of Kozyuk destroying the reference, the rejection does not require the exact location to be between the stabilizer as argued by the applicant. In addition, the elimination of a part from a reference is obvious because removing the measurement portion leaves the device in a means which stabilizes flow in the same manner as does applicants.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Response to Amendment

14. The declaration filed on 18 May 2006 under 37 CFR 1.131 has been considered but is ineffective to overcome the stated references.

The declaration fails to establish that the device alleged to provide the commercial success/long felt need is the claimed invention of the instant application. Declarations not relating to the specifics of the claimed invention are not persuasive.

Art Unit: 3753

Evidence of commercial success/long felt need must be commensurate in scope with the scope of the claims.

The declaration is submitted by applicant and is biased towards applicant's invention.

Therefore, having considered the factual inquiries specified in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), and the factual allegations in the applicant's declaration in accordance with the provision of 37 CFR 1.132, the rejections are deemed proper for the reasons set forth above and in the rejection in the instant application.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 8AM - 5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CP

A handwritten signature in black ink, appearing to be 'CP' or similar initials.

8 June 2006

A handwritten signature in black ink, reading 'Eric Keasel'.

**ERIC KEASEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700**